

Sureshot Lake

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Clarity Report of September 3,
2015



Land & Water Conservation Department

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Sureshot Lake AIS Monitoring and Water Clarity Report

WBIC: 1021000
Previous AIS Findings: None
New AIS Findings: Purple Loosestrife, Variegated Reed Manna Grass, Yellow Iris
Field Date: September 3, 2015
Field Crew: Stephanie Boismenu and Sara Mills, AIS Project Assistants,
Oneida County Land and Water Conservation Department
Report by: Sara Mills

Stephanie and I monitored Sureshot Lake on September 3, 2015. It is a 19 acre lake located in the town of Woodruff (Figure 1). It is a seepage lake with a maximum depth of 27 feet. There is one public boat landing. The majority of the lake is surrounded by American Legion State Forest. The small portion that is privately owned appeared to be minimally developed and kept natural. The WDNR lists Sureshot Lake's trophic state as mesotrophic and substrates as 65% sand, 20% gravel, 5% rock, and 10% muck. Mesotrophic lakes are commonly clear waterbodies with a variety of submerged aquatic plants and support a wide variety of fish. They have an intermediate level of nutrients and productivity, more than oligotrophic lakes, but not nearly as much as eutrophic lakes. The lake had a lot of lily pads and emergent vegetation. We were notified to monitor Sureshot Lake because some of the emergent vegetation appeared to be reed manna grass (*Glyceria maxima var. variegata*), a prohibited invasive species, and needed confirmation.

The conditions for the lake monitoring were partly sunny with little wind. We entered the lake from the public boat landing (Figure 2). There is not a bathymetric map for the lake so Stephanie and I used the depth finder to find a deep point in the lake. We dropped the anchor to prevent the canoe from drifting while taking measurements. I collected a GPS location for our measurements, a Secchi disk reading for water clarity, and dissolved oxygen and temperatures for water quality (Table 1).

After data collection, we performed AIS presence/absence checks. Since the lake is only 19 acres, we intensely monitored the entire shoreline. We meandered the shoreline via walking along the shoreline, using an aquascope to eliminate glare on the water surface, looked through vegetation, and checked under and around solid surfaces.

Findings:

Aquatic Invasive Species:

We discovered the plant believed to be reed manna grass in the location that it was reported. We pulled all the plants that we could find and brought them to the DNR station for proper identification. They were confirmed to be variegated reed manna grass. In the same area that we found the reed manna grass, we also found iris plants. The homeowner adjacent to the stand of plants told us that some of the irises bloom yellow and some bloom blue. We took the iris sample to the DNR station for identification and it was confirmed to be yellow iris. Also in the same area, we found two plants that we believed to be purple loosestrife. We also brought those plants to the DNR station for proper identification and they were confirmed to be purple loosestrife. All invasive species discoveries were found in the American Legion State Forest. All new invasive discoveries are shown in Figure 3.

Secchi Disk Reading:

Sureshot Lake was green colored with very minimal amounts of algae which resulted in a Secchi disk reading of 14.25 feet at a depth of 21 feet.

Dissolved Oxygen and Temperature:

See Table 1.

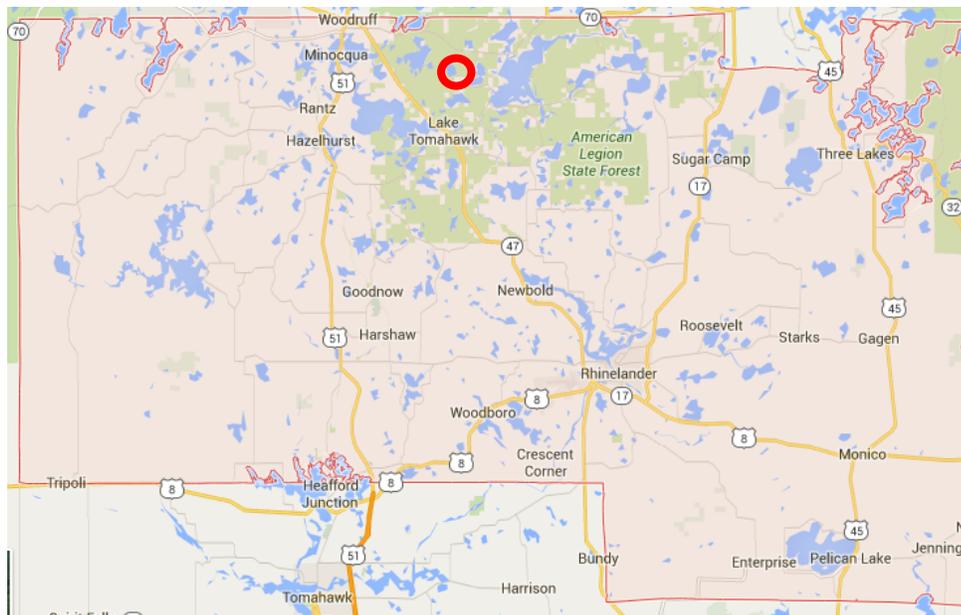


Figure 1. Map of Oneida County, WI with Sureshot Lake circled.



Figure 2. Map of Sureshot Lake with deep hole and public boat landing.

Deep Hole GPS Coordinates: 45.85066431, -89.57563666

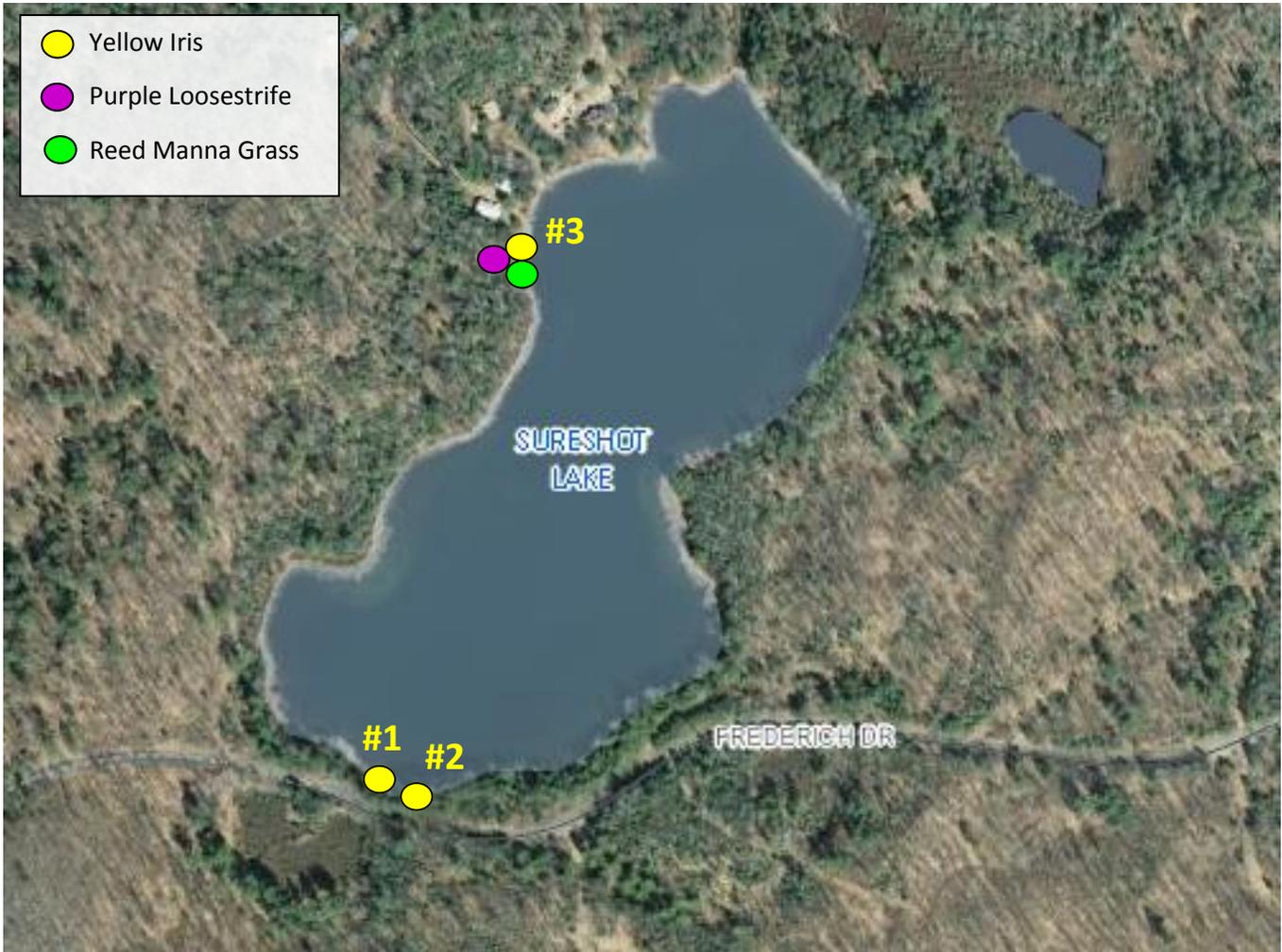


Figure 3. Map of Sureshot Lake with new invasive species discovered.

Unconfirmed Yellow Iris #1 GPS Coordinates:	45.84780247, -89.57786003
Unconfirmed Yellow Iris #2 GPS Coordinates:	45.84781068, -89.57745594
Confirmed Yellow Iris #3 GPS Coordinates:	45.85080704, -89.57683104
Confirmed Purple Loosestrife GPS Coordinates:	45.85090039, -89.57678201
Confirmed Reed Manna Grass GPS Coordinates:	45.85090039, -89.57678201

All iris plants were found without flowers. Confirmed yellow iris #3 was found in an approximate 4' by 6' bed of blue flag and yellow irises and other emergent vegetation. Yellow iris #1 and #2 (single plants) were not sampled due to lack of identifying features including seed pods. Leaf size and blue-green coloration caused us to believe it to be yellow iris, but they are not definitive identifying features. Before further management, yellow iris #1 and #2 need to be confirmed during flowering period.

Table 1. Dissolved oxygen levels and temperature readings at the deep hole site.

Depth	Temperature	Dissolved Oxygen Level
1'	74.8°F	7.59 mg/L
3'	73.6°F	7.58 mg/L
5'	72.8°F	8.08 mg/L
7'	72.2°F	7.83 mg/L
9'	71.0°F	8.41 mg/L
11'	70.0°F	8.12 mg/L
13'	69.5°F	7.77 mg/L
15'	68.6°F	6.74 mg/L
17'	68.0°F	5.98 mg/L
19'	67.2°F	1.80 mg/L

Resources: <http://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=1021000&page=facts>